

SCCARA-GRAM



Santa Clara County Amateur Radio Association

Volume 46, Number 8

August 2021



2021 – Our 100th Year!

Meetings & Gatherings

Our in-person meetings are still canceled due to the Covid-19 pandemic. The board meeting will be held verbally at the normal day and time on our 2 m repeater immediately following the Monday night net. The club station is open, usually the last Saturday of the month from 10 am to 4 pm. Masks and social distancing are required. Still no electronic flea markets.

Progress report:

Due to the more infectious delta strain, new cases in California are increasing, mainly among the unvaccinated. Now it's 12 per 100,000. Fortunately the vaccine is effective on the delta strain. The vaccination rate is slowing down.

Statewide 62% are fully vaccinated, 59% last month. In Santa Clara County 78% are fully vaccinated, 75% last month.



Calendar

- 8/9 **SCCARA General Meeting** -- **canceled**
- 8/16 **SCCARA Board Meeting:** On our 2 m repeater after the net at 7:30 PM)

General Meeting

Day: Monday, Aug. 9 -- **Canceled**
Time:
Place:
Featuring:



ARRL News

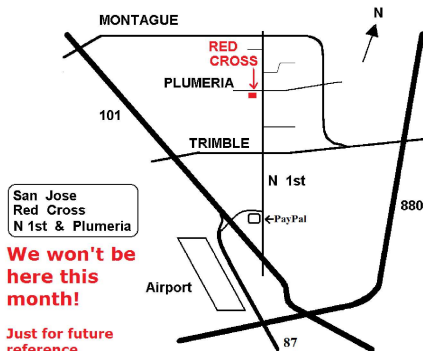
From *The ARRL Letter*, July 1, 2021

“Russian Woodpecker” Antenna Array Now a Cultural Heritage Site



The massive Duga-1 antenna array that transmitted the obnoxious and infuriating “Russian Woodpecker” HF signal from the 1970s until the late 1980s is now a cultural heritage site. The array, located near Chernobyl in Ukraine, was part of an over-the-horizon radar (OTH-R) system designed to detect and offer early

warning of incoming ballistic missiles from the US. A complementary receiver site was located some 40 miles away. While the system was operating, its broad rat-a-tat signal, typically at a 10 Hz rate, caused severe interference in the amateur bands.



The **SCCARA-GRAM** is published monthly by the **SANTA CLARA COUNTY AMATEUR RADIO ASSOCIATION**, PO Box 106, San Jose CA 95103-0106.

SCCARA was formed in 1921 and became a non-profit corporation in 1947. SCCARA is an affiliate of the American Radio Relay League (ARRL). The club station is W6UW.

Permission to reprint articles is hereby granted, provided the source is properly credited.

The deadline for articles is the last Monday of the month.

SCCARA web page <https://www.qsl.net/sccara>
club email: w6uw@arrl.net or w6uw@sbcglobal.net

BOARD OF DIRECTORS (officers are also directors)

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SCCARA REPEATERS

SCCARA owns and operates two repeaters under the call W6UU:
2 meter: 146.985 - PL 114.8
70 cm: 442.425 + PL 107.2

Phone auto-dial and auto-patch is available. The two meter repeater is located at Eagle Rock near Alum Rock Park in the foothills of east San Jose. The 70 cm repeater is located at the Regional Medical Center (formerly Alexian), east of downtown San Jose, north of 280 and 101.

SCCARA NETS

On our two meter repeater: Mondays at 7:30 PM, (not the second Monday--our meeting night). Coordinator: Don Village, K6PBQ. On ten meters, 28.385 MHz USB, Thursdays at 8:00 PM. Net control: Wally Britten, KA6YMD. Visitors welcome.

N0ARY PACKET BBS

SCCARA hosts the packet BBS N0ARY (connect to n0ary-1). User ports: 145.09 MHz at 1200 baud, 433.37 MHz at 9600 baud, and telnet sun.n0ary.org (login "bbs"). Sysop: Gary Mitchell, WB6YRU. For general packet info, see the NCPA web site ncpa.n0ary.org.

AMATEUR LICENSE TESTING

ARRL/VEC Silicon Valley VE group:
Morris Jones, AD6ZH: 408-507-4698

The Chernobyl nuclear power plant disaster and the end of the Cold War preceded the end of the system and the interference it caused. NATO military intelligence discovered and photographed the structure, which it dubbed "Steel Yard."

Nearly 2,300 feet long and more than 450 feet tall, the steel beams of the radar array are in the Chernobyl exclusion zone tower above the surrounding forest. Seen from a distance, it appears to be a massive wall or the start of a cage. As Vice recently reported, the Association of Chernobyl Tour Operators was the first to announce that Ukraine had made Duga-1 a protected heritage site. The Russian Interfax news service later reported the official designation.

"Our heritage is not only the area around the power plant but also the buildings located on its territory," Oleksandr Tkachenko, Ukraine's Minister of Culture and Information Policy, said in a Telegram thread about the announcement. "So now we are working on identifying other objects that should be part of the list of monuments. Our goal is to prevent destruction when possible."



A Duga array seen from a distance. [Ingmar Runghe photo]

The Soviet Union deployed two similar OTH-R installations -- known as Duga-1 and Duga-2 -- the one near Chernobyl and another in eastern Siberia. Transmitter power levels were rumored to be in the 10-megawatt EIRP range.

Duga-1 was the focus of a 2015 documentary, *The Russian Woodpecker*, by Chad Gracia. The film includes interviews with Duga Commander Vladimir Musiets and others involved in building and operating the OTH-R system. The production was a 2015 Sundance Film Festival winner in the documentary category. In recent years, the Duga-1 radar has also played a role in other films, as well as in various video games and novels.

From *The ARRL Letter*, July 8, 2021

First X-Class Major Solar Flare of Solar Cycle 25 Blacks Out HF on July 3



For a brief time on July 3, a lot of radio amateurs were wondering, "Where did the bands go?" as the first X-class solar flare in 4 years blacked out HF propagation for a time.

"I was on 20-meter FT8, and my waterfall display went from solid red signals to solid nothing in the blink of an eye," Scott Craig, WA4TTK, told "K7RA Solar Update" Editor Tad Cook, K7RA. "It lasted about 10 minutes." Craig was not alone.

"Many American radio amateurs reported sudden HF propagation blackouts on Saturday morning, July 3, when solar active region 12838 produced an X1.5 major solar flare that reached maximum intensity at 1429 UTC, the first X-class solar flare of Solar Cycle 25 and the first since 2017," said Frank Donovan, W3LPL. "HF

propagation blackouts are caused when x-ray and extreme ultraviolet radiation from X-class solar flares strongly ionizes the absorbing D-region in the Earth's sun-facing dense lower ionosphere. The top layer of the atmosphere is not involved," he explained.

In this instance, it caused what NOAA's Space Weather Prediction Center (SWPC) calls an R3-level or "strong" radio blackout (on a scale of R1 - R5). An R3 incident can cause a "wide-area blackout of HF radio communication [and] loss of radio contact for about an hour on [the] sunlit side of Earth. Low-frequency navigation signals degraded for about an hour."

Donovan said that X-class major solar flares are necessary consequences of steadily increasing Solar Cycle 25 activity. "95% of all X-class solar flares occur when the solar flux index is 90 or greater. The remaining 5% can occur any time during the solar cycle," he points out. "X1-class major solar flares typically degrade HF propagation for only an hour or two at mid and high latitudes, only on Earth's sunlit side."

X-class major flares are measured on an open-ended scale. The strongest one ever recorded was an X28 flare in 2003, hundreds of times more powerful than the July 3 X1.5 solar flare. X10-class and stronger solar flares typically have effects that last for most of a day and affect the entire sunlit side of the Earth. Fortunately, X10-class solar flares occur only about once every 20 years or more.

"Much more severe and long-lasting HF propagation degradations are often caused by the coronal mass ejections (CMEs) often associated with -- but not caused by -- major solar flares," Donovan explained. "HF propagation degradation caused by CMEs typically begins about 2 days after the effects of the associated solar flare, the duration of the delay depending on interactions between the CME and the solar wind."

The CME associated with the July 3 X1.5 solar flare is likely to have little to no effect on HF propagation going forward, because the active region was very close to the western edge of the visible solar disk when the CME erupted. Region 12838 rotated off the visible disk on Sunday, July 4.

Solar flares have no significant effect on VHF ionospheric propagation, but can degrade satellite communications passing through the ionosphere. More frequent, less powerful M-class medium solar flares produce short-duration degradation at high latitudes. Very frequent, much weaker A-, B-, and C-class solar flares do not degrade HF propagation.

-- Thanks to Frank Donovan, W3LPL

Registrations Strong for 24th Annual International Lighthouse Lightship Weekend



Set for August 21 - 22, the 24th annual International Lighthouse Lightship Weekend (ILLW) will be back, despite the disruption of the global COVID-19 pandemic. Each year, typically on the third weekend of August, participants set up portable stations at or near lighthouses and lightships around the world. Last year, prospects for the event were looking dim, but "regular supporters wanted the event to be a beacon of hope," the event's sponsor said. More than 360 registrations from 43 countries backed up their belief. As of July 8, this year's registration tally had already topped

200, with 25 participants signed up to activate lighthouses or

lightships in the US. The ILLW typically attracts entries for some 500 lighthouses in more than 40 countries. The event has few rules and is not a typical contest-type event. The ILLW will begin at 0001 UTC on August 21 and continue through 2400 UTC on August 22.

Each station's operators decide how they will operate their station with respect to modes and bands. There are no power restrictions or entry classes and no scores.

"We wish operators to enjoy themselves and have fun while making contact with as many amateur radio stations as possible," ILLW said in the event announcement. "We request that stations take time to work other lighthouses or lightships, as well as the slow operators or newly licensed or QRP stations." Participants contact the relevant authorities to obtain permission to operate. It is within the guidelines of the event to move operations from a lighthouse to a museum for historic reasons. In any case, the lighthouse should be visible to, and visited by, the public wherever possible.

Visit the [ILLW website](https://illw.net/) for more detailed information.

From *The ARRL Letter*, July 15, 2021

Most 2021 Field Day Participants were Class D

In the second ARRL Field Day (FD) with rule waivers in place, some 4,815 entries were received at ARRL Headquarters by July 13 -- the majority in Class D (Home Stations). Last year saw more than 10,213 entries and 18,886 participants. Before the pandemic, in 2019, 3,113 entries were submitted, with 36,420 total participants.

"It appears that larger groups were more the norm in pre-pandemic times, as expected," ARRL Contest Program Manager Paul Bourque, N1SFE, observed. "From the discussions I've been having with participants, even though some groups gathered in larger numbers this year, many participants chose either to gather in smaller groups or to operate solo from home as Class D or Class E stations. Although I don't think we'll see the number of entries that we did last year, we're close in terms of the number of participants."

With about 2 weeks to go until the entry submission deadline, the tally of participants reported is 16,166. They made just north of 1 million total contacts.



Andy Goss, AA5JF, took part in the first Field Day for the Augusta University Amateur Radio Club (WA4AUG), which set up in the Georgia school's Critical Event Preparedness and Response (CEPaR) Center.

"FD was already a success on Saturday, with the stations working smoothly, and lots of local visitors dropping by," said Andy Goss, AA5JF, at Augusta University Amateur Radio Club's WA4AUG. "An hour after sunrise on Sunday, we were counting our points, when Darby, KK4PEQ, announced he had just worked a station on 6-meter phone -- just playing around on 50 MHz using the 20/15/10 tribander," Goss said. "He stayed on 6 [meters] for five QSOs, but we quickly [moved] to 10 and 15, finding those bands

were open to just about everywhere, and we doubled our score in just 3 hours. What a rush!"

There's still time to submit your 2021 Field Day entry. Most of this year's Field Day entries have been submitted via [the online web app](#) (worth 50 bonus points!), although some 50 paper logs have been mailed in. Participants can check the [Entries Received](#) page to make sure their entries were received and complete. If the entry status indicates "Pending documents," either the required dupe sheet (or in lieu of that, a Cabrillo log file), or supporting documentation of claimed bonus points is missing. Bourque said some 250 entries fall into that category right now. Participants can add documentation or edit their entries by following the link provided in the confirmation email sent to the email address provided upon entry, up until the entry submission deadline. Field Day entries must have been submitted online or postmarked no later than July 27, 2021.

Online web app <http://field-day.arrl.org/fdentry.php>
Entries received <http://field-day.arrl.org/fdentriescvcd.php>

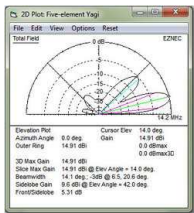


Scott Hanley, WA9STI, operated in the Los Padres National Forest from a site at 7,400 feet elevation.

The breakdown of Field Day entries by class, as of July 13, showed 4,815 total entries, with 613 in Class A, 582 in Class B, 57 in Class C (Mobile), 2,619 in Class D, 858 in Class E, and 86 in Class F.

For his 2021 Field Day, Scott Hanley, WA9STI, took to the woods -- the Los Padres National Forest -- at a site some 7,400 feet elevation in the mountains overlooking California's Central Valley. He operated as WA6LE in Class 1B. He put 358 contacts in the log on CW and phone -- short of his 400-contact goal. "Almost all activity was on 20, 40, and 75/80 meters to a G5RV or end-fed 20-meter dipole," Hanley said. "Six meters did not open, so I only had two local SSB contacts and only three contacts on 2-meter FM."

EZNEC Antenna Simulator



Roy Lewallen, W7EL, says that after 31 years of "developing, selling, and supporting EZNEC and its predecessor, ELNEC," he is [retiring](https://eznec.com/retirement.htm).

Starting on January 1, 2022, EZNEC Pro/2 will be free and may be copied and distributed. He will no longer support the software.

Tubes

Do you use tubes or are you interested in experimenting with tubes? Do you know someone who is? I have some that need a new home. They should be good, but I don't have the ability to test them so no guarantee. Documentation is easily available, a Google search turns up loads of info on them.

- 12SJ7, RCA (RF pentode)
- 3A3A, Zenith (high voltage rectifier)
- 35Z5 GT, GE (half-wave rectifier)
- 50L6 GT, GE (power AF amplifier)



I'm 99% sure the 3A3 came from a 1960's era TV, the rest probably did too (or from a radio or audio amp). If you're interested, send me an email: wb6yru@ix.netcom.com

73, Gary

Meeting Minutes

General Meeting, July 12, 2021



{meeting was canceled}

Board Meeting, July 19, 2021



Held verbally on our 2 m repeater W6UW/R

Meeting called to order by President Gregg Lane KF6FNA at 7:41 PM PDT

Attendance:

President Gregg Lane KF6FNA; VP Ned Tufekcic AC6YY; Treasurer Goetz Brandt K6GKB; Station Trustee Don Village K6PBQ; Directors: Lou Steirer WA6QYS, Wally Britten KA6YMD, John Parks, W6JPP, Ben Shuford, KK6CCU, James "Rusty" Rustemier KI6ZSK.

Excused absence: Secretary Truman Lindsey N6TRU

Visitors: Editor Gary Mitchell WB6YRU

President's Report, Gregg KF6FNA: Nothing new to report

Vice President's Report, Ned AC6YY: Nothing to report

Secretary's Report, Gregg KF6FNA: The previous board meeting minutes were published in the SCCARA-GRAM. No corrections. Approved by acclamation.

Treasurer's Report, Goetz K6GKB: checking = \$ 11208.80 , cash = \$ 216.04 , Total = \$ 11424.84

Trustee's Report, Don K6PBQ: The club station will be open on Saturday July 31.

Standing Committees

Repeater chairman's report, Wally KA6YMD: The 2 m repeater has been improved somewhat with the addition of a circulator. One time the controller needed to be reset.

Webmaster's report, Wally KA6YMD: I'm keeping the web site up to date, nothing else new.

Editor's report: Gary WB6YRU: Not much new, except I'd like to encourage the club higher-ups to make better use of the newsletter to communicate with the membership.

BBS Sysop's report: Gary WB6YRU: Nothing new to report, the BBS is running normally.

Old Business:

Gregg KF6FNA: Some antennas are up at the Red Cross (club station), others are still waiting for installation.

Don K6PBQ: We have a vertical antenna and a dipole antenna up and working for HF.

Gregg KF6FNA: Field Day is over with, any questions or comments? (nothing heard)

Gregg KF6FNA: Regarding our special event station, are there any comments on opening it up for 2 m activity?

KK6CCU: I'd like to see that happen. I won't be here July 25 to Aug. 6, hopefully it won't be during then. I would like the QSL certificate.

Gary WB6YRU: My understanding was the QSL certificate was canceled.

Gregg KF6FNA: If we get significant activity on this 2 m segment of the special event station, I'd like to resurrect it.

John W6JPP: Maintenance work on the antenna trailer is still needed and pending. We need to come up with some dates to get together.

New Business:

John W6JPP: Pacificon is a go. We can use some volunteers, contact the Pacificon people.

Meeting adjourned at 8:07 PM PDT

Gary Mitchell WB6YRU, recording for the Secretary

Packet Pieces

Downloaded from the BBS packet network:

=====
Date: 28 May 2011 04:16
From: W1GMF@W1GMF
To: HUMOR@USA
Subject: Dating Service

A woman went to a computer dating service and said she didn't care about looks, income or background. All she wanted was a man of upright character.

Then a man came in and told them the only thing he was seeking in a woman was intelligence.

The service matched them together because they had one thing in common - they were both compulsive liars.

=====
Date: 16 Apr 2011 19:52
From: W1GMF@W1GMF
To: HUMOR@USA
Subject: City That Never Sleeps

Our family was dazzled by the sights and the bustling crowds during a visit to Manhattan. "This is the city that

never sleeps," I told my eleven-year-old daughter.

"That's probably because there's a Starbucks on every corner," she observed.

Need Help?

Amateurs have a long history of helping each other. An experienced amateur who helps another is traditionally called an "Elmer." If you have a question or problem, you are encouraged to ask one of SCCARA's Elmers. Below is a list of topics and who to contact for each. If your topic isn't listed, ask one of the Elmers under the topic that comes closest and we'll ask around.

If you consider yourself to be reasonably competent in at least one area of amateur radio and would be willing help others, please fill out an Elmer form (available from the club secretary or on our web site).

Topics:

Antennas, feed-lines, tuners: **NV6W, W6JPP, K6PBQ**

CW (Morse code): **NV6W, K6PBQ**

DX (long distance, propagation): **NV6W**

EchoLink: **K6GKB**

Emergency operating, preparedness: **WA6QYS**

HF operating techniques: **NV6W, K6PBQ**

Homebrew projects, construction: **WB6YRU**

Legal, FCC rules: **WB6YRU**

License testing, new amateurs: **W6JPP**

Lightning protection, grounding: **WB6YRU**

Packet Network (BBS, forwarding): **WB6YRU**

SCCARA (club inner workings): **K6PBQ, WB6YRU, WA6QYS**

Station set-up, equipment: **K6PBQ, W6JPP**

TVI, RFI: **WB6YRU**

Contacts:

K6GKB, Goetz Brandt, 408-259-7287

e-mail: goetz@ix.netcom.com

NV6W, James D. Armstrong, Jr.,

evening & msg: 408-670-1680

W6JPP, John Parks

e-mail: w6jpp@arrl.net

K6PBQ, Don Village, 408-263-2789

e-mail: donvillage7@yahoo.com

WA6QYS, Lou Steirer, 408-241-7999

e-mail: wa6qys@arrl.net

WB6YRU, Gary Mitchell, 408-269-2924

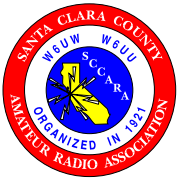
packet: home BBS N0ARY

e-mail: wb6yru@ix.netcom.com

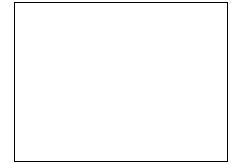
Newsletter Notes

SCCARA currently has 39 members. That's fewer than I think it should be, but be that as it may... If each member wrote only one article for the newsletter per year, there would be 3 or 4 articles from the club in each edition. Wouldn't that be great?

73, Gary WB6YRU, editor



SCCARA
 Santa Clara County Amateur Radio Association
 PO Box 106
 SAN JOSE CA 95103-0106



FIRST CLASS

ADDRESS SERVICE REQUESTED

SCCARA Membership Form for 2021

If renewing and none of your info has changed, we only need your name and call

Name: _____ Call: _____ Class: _____

Address: _____ Licensed since (year): _____

City: _____ State: _____ Zip+4: _____

Telephone: _____ New Member Renewal I'm also an ARRL member

E-mail: _____

only for club communications and the SCCARA-GRAM newsletter (pdf)

Membership type and dues: Individual, \$20 Family, \$25 Student, \$10 (under 18)

Memberships start January 1 and expire December 31.

Family memberships (more than one member per household): please include the above info for each member, use separate forms.

New members:

Dues are prorated: dues x (11 - month) x 10% For example: July would be \$20 x (11-7) x 0.1 = \$8)

If joining in November or December: normal dues for next year, the rest of this year is included free.

I want the paper newsletter delivered by U.S. Mail for an additional \$15 per year

(Prorated, \$1.25 per month. That's \$13.75 if starting in February, \$12.50 if starting in March, etc.)

\$ _____ **Total** enclosed

Give this completed form and payment to the Secretary or Treasurer at any meeting or mail to the club address.